

CLASSIFICATION

CONFIDENTIALCONTROL - U.S. OFFICIALS ONLY
SECURITY INFORMATION

CENTRAL INTELLIGENCE AGENCY

REPORT NO.

25X1

INFORMATION REPORT

CD NO.

COUNTRY Germany (Russian Zone)

DATE DISTR. 30 October 1951

SUBJECT German Device for Detection and Measurement
of Gamma Radiation

NO. OF PAGES 2

REFERENCE COPYNO. OF ENCLS.
(LISTED BELOW)**DO NOT CIRCULATE** SUPPLEMENT TO
REPORT NO.

THIS DOCUMENT CONTAINS INFORMATION AFFECTING THE NATIONAL DEFENSE
OF THE UNITED STATES WITHIN THE MEANING OF THE ESPIONAGE ACT OF
U.S.C. 17 AND 18, AS AMENDED. ITS TRANSMISSION OR THE REVELATION
OF ITS CONTENTS IN ANY MANNER TO AN UNAUTHORIZED PERSON IS PRO-
HIBITED BY LAW. REPRODUCTION OF THIS FORM IS PROHIBITED.

THIS IS UNEVALUATED INFORMATION

1. Between April and September 1951, the Auergesellschaft A.G. in Berlin developed a device for the detection and comparative measurement of gamma radiation. It is modelled after a similar device for the measurement of X-rays, which has been in existence for some time.
2. The device consists of a rubber spectacle frame which fits closely to the eyes. Fitted into the frame in place of lenses are two sheet iron tubes with a diameter of about 45 mm and a length of 40 to 50 mm. One tube is a "blind", closed by a lid at the far end. The other tube is closed on the far end by a luminescent screen sensitized for gamma radiation by the application of zinc sulfides. On this screen are placed from one to three luminescent spots of varying intensity corresponding to a dose of gamma rays expressed in Roentgen per hour.
3. In order to test an area for the existence of gamma radiation, the device is worn as a pair of spectacles, and the lid of the "blind" tube is closed. This makes it possible for the other eye to adapt itself to the darkness in the other tube. After a few minutes the bright spots will clearly appear on the screen. If there is gamma radiation in the area, the screen between the luminescent spots will also become luminescent through action of that part of gamma radiation which is absorbed by the screen. Luminescence caused by gamma radiation can then be compared to the luminescence of the spots, and thus the intensity of the gamma radiation can be measured by comparison.
4. The Auergesellschaft has completed and tested a number of samples of this device and plans to start manufacture soon. So far, the luminescent spots on the screen correspond to gamma radiation within the limits of 0.8 Roentgen per hour and about 4 Roentgen per hour. The Auergesellschaft hopes to be able to reduce the lower limit soon to less than 0.3 Roentgen per hour.

CLASSIFICATION

CONFIDENTIAL

CONTROL - U.S. OFFICIALS ONLY

STATE	X	NAVY	X	NSRB
ARMY	X	AIR	X	FBI

DISTRIBUTION

Document No.	
No Change in Class.	☐
☐ Declassified	
Class. Changed To: TS S (C)	
Auth: HB 70-2	
Date: 28/10/99	
By: 	

-2-

5. The radiation detector is mainly thought of as an inexpensive protection device for the civilian population which can be used on a large scale. Its price will be around DM 16.00. The usefulness of this device to troops is questionable, mainly because of the long adaptation time needed. The Auegesellschaft has tried to cut down this time by various methods of improvement, but so far has not had tangible results. 1

6.

25X1

CONFIDENTIAL

NOT CONTROL/U.S. OFFICIALS ONLY